

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT TRANSMITTAL FORM



Applicant(s): Stephen Christopher Kitson et al.

Serial No.: 09/816,942

Filed: March 23, 2001

For: Bistable Nematic Liquid Crystal Device

Art Unit: 2871

Examiner: Thoi V. Duong

Confirmation No.: 6960

Customer No.: 27623

Attorney Docket No.: 30001063-2

Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

We are enclosing:

1. PTOL-85;
2. Applicant's Reponse to Statement on the Reasons for Allowance Under 37 CFR 1.104(e);
3. Change of Address Form;
4. Fee Address Indication Form
5. Transmittal letter in duplicate; and
6. Postcard.

Please charge any additional fees or credit any such fees, if necessary to Deposit Account No. 08-2025 in the name of Hewlett-Packard Company. A duplicate copy of this sheet is attached.

Respectfully submitted,

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Date: April 5, 2005

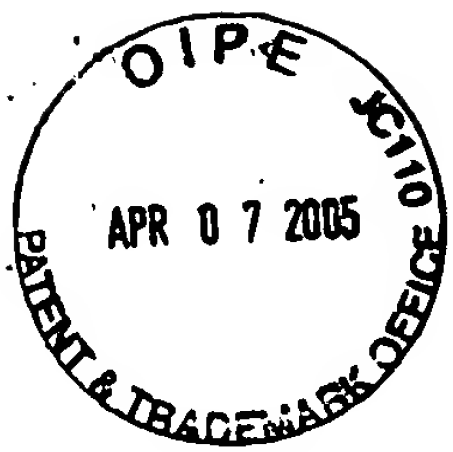
CERTIFICATE OF MAILING

I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING DEPOSITED WITH THE U.S. POSTAL SERVICE AS FIRST CLASS MAIL IN AN ENVELOPE ADDRESSED TO: MAIL STOP ISSUE FEE, COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450, , ON April 5, 2005.

J. Nicole Smith
NAME

SIGNATURE

April 5, 2005
DATE



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): S. Kitson et al.
Serial No. : 09/816,942
For: BISTABLE NEMATIC LIQUID CRYSTAL DEVICE
Filed: March 23, 2001
Examiner: Thoi V. Duong
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Confirmation No. : 6960
Customer No. : 27,623

Attorney Docket No.: 30001063

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P.O. Box 1450
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RESPONSE TO STATEMENT OF REASONS FOR ALLOWANCE
DATED JANUARY 7, 2005

Sir:

In response to the Notice of Allowance dated January 7, 2005, please enter the following response in the file history of the above-noted application as follows:

Applicants note receipt of the Reasons for Allowance in the pending Action. Applicants respectfully submit that the claims of the instant application are allowable for the reasons set forth in the specification, as well as the arguments presented in applicant's response(s), if any.

The Examiner provides reasons for allowance indicating that none of the prior art of record fairly suggests or shows all of the limitations as claimed.

Specifically regarding claim 1, the Examiner states that none of the prior art discloses, in combination with other limitations as claimed, a surface alignment comprising an array of posts which have at least one of a shape and an orientation to induce a liquid crystal director adjacent said posts to adopt two different tilt angles in substantially the same azimuthal direction, and wherein said posts are arranged in one of a random or pseudorandom array.

Specifically regarding claim 30, the Examiner states that none of the prior art discloses, in combination with other limitations as claimed, a surface alignment comprising an array of posts which have at least one of a shape and an orientation to induce a liquid crystal director adjacent said posts to adopt two different tilt angles in substantially the same azimuthal direction, and wherein at least part of a side wall of said posts is tilted at a tilt angle in the range of about 5 to 7 degrees with respect to the normal to the plane of the first cell wall.

Specifically regarding claim 54, the Examiner states that none of the prior art discloses, in combination with other limitations as claimed, a surface alignment comprising an array of posts which have at least one of a shape and an orientation to induce a liquid crystal director adjacent said posts to adopt two different tilt angles in substantially the same azimuthal direction, and wherein said posts have a cross section selected from the group consisting of circle shape, square shape, oval shape, and diamond shape.

The Examiner also states that U.S. Patent No. 6,456,348 to Bryan-Brown et al., hereinafter "Bryan-Brown", fails to disclose or suggest a surface alignment comprising

an array of posts arranged in one of a random or pseudorandom array, or tilted at a tilt angle in the range of about 5 to 7 degrees, or having a cross section selected from the group consisting of circle shape, square shape, oval shape, and diamond shape. The Examiner states that the reference of Bryan~Brown et al.

only discloses a bistable nematic liquid crystal device having a surface alignment grating that permits the liquid crystal molecules to adopt two different pretilt angles in the same azimuthal plane, wherein the grating may be provided with small pillars (or posts) (col. 3, lines 30-35 and lines 56-63).

Applicants wish to re-iterate their assertion as provided in previous communications, that the small spacer pillars disclosed in Bryan-Brown do not disclose or suggest an array of posts for surface alignment as disclosed in claims 1, 30 and 54.

The pillars disclosed in Bryan-Brown are spacer pillars for assisting in correct spacing apart of the cell walls and also for providing a barrier to liquid crystal material flow when the cell is flexed (co. 3, lines 59-60). This is the only purpose set forth for the pillars in Bryan-Brown, and although these spacer pillars may be formed by the material of the alignment layers, the spacer pillars of Bryan-Brown cannot effect a bistable alignment, as required by claim 1.

The bistable alignment in the Bryan-Brown et al. patent is provided by the monograting alone, and thus the bistability is achieved without the use of these spacer pillars. Therefore, the spacer pillars of Bryan-Brown will not effect a bistable alignment, as required by claim 1.

Any statements set forth by the Examiner in the Reasons for Allowance which differ from that previously stated by Applicant herein and in the specification and responses filed with the U.S. Patent and Trademark Office form no basis for allowance and therefore provide no grounds for application of the Doctrine of Prosecution History

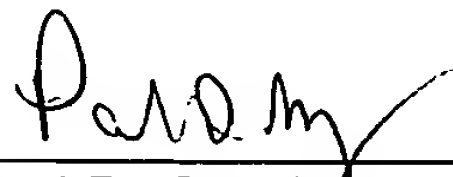
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Estoppel in the construction of the allowed claims. Applicant respectfully requests that the application be passed to issuance.

Respectfully submitted,

Date: 4-5-05



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